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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,290	08/19/2003	Jeremy Donaldson	10015085-7	4035

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER
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ALANKO, ANITA KAREN

ART UNIT	PAPER NUMBER
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1765

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/643,290	DONALDSON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Anita K Alanko	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-26 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/19/03, 5/17/04</u>  | 6) <input type="checkbox"/> Other: ____                                     |

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***Claim Rejections - 35 USC § 112***

Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how the body of the claim relates to the preamble. The preamble cites a method, but the body has only apparatus limitations. In addition, the specification also lacks a clear link between the structure and the means for limitations. Since the means for limitations invoke 112, 6<sup>th</sup> paragraph, it is unclear what the metes and bounds of the claim are because it is unclear what structure corresponds to the means for limitations.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 and 7-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Milligan et al (US 6,555,480).

Milligan discloses a method and product formed by the method comprising forming a plurality of slot portions and etching a trench to form a compound slot (Fig. 13, Fig.3, col.8, lines 25-39).

Claims 1-9, 11-12, 14-19, 21-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Soik et al (US 6,745,469 B1).

Soik discloses a method comprising:

forming a plurality of slot portions 308 in a substrate 302 (Fig.14); and

etching a trench 310 (or the portions could be reversed, slot 310 and trench 308) in the substrate contiguous with the plurality of slot portions to form a compound slot (col.14, lines 38-42).

As to claim 2, Soik discloses to form a v-shaped profile (col.10, line 49).

As to claim 3, Soik discloses to form first and second sidewalls (354 or 352, chamfers, Fig.16) that are oriented at an angle of between 10 degrees and 80 degrees relative to the first surface 304.

As to claims 4-5, Soik discloses to form a plurality of slots or vias (Fig.11).

As to claims 6-7 and 12, Soik discloses to laser machine or etch (col.14, lines 38-42). Broadly interpreted, grinding, water jet cutting or electrochemical machining is wet etching.

As to claim 8, the method of etching inherently requires masking in order to form the slot selectively in the surface of the substrate.

As to claim 9, the V-shaped profile is anisotropic.

As to claim 11, Soik discloses to retain material between slots (Fig. 11).

Further, as to claim 14, Soik discloses to form a reinforcement structure 322, 334 (Fig.14), which makes the substrate stronger.

As to claim 15, see claim 3. The chamfers comprise two angled walls.

As to claims 16-17, see the rejection of claims 4-5.

As to claim 18, the EDM of Soik is expected to be isotropic.

As to claim 19, selectively etching in Soik inherently requires positioning a material to control removal of substrate material.

As to claim 21, Soik discloses angled walls, (Figures 14, 21 and 22; e.g., 402 or sidewalls 308).

As to claim 22, Soik discloses angled walls, e.g. chamfers (Fig.16), and sidewalls of opening 308 (Fig. 14).

As to claim 23, see the rejection of claims 8 and 19.

As to claim 24, the method of Soik is not expected to increase the given dimensions.

As to claim 25, the method of Soik discloses to form portions that extend through less than a majority of the thickness (310 or 308).

As to claim 26, Soik discloses to form sidewalls at greater than 10 degrees and less than about 90 degrees (Fig.14).

#### ***Allowable Subject Matter***

Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or suggest a print cartridge incorporating a substrate formed in accordance with the method of claim 14, as in the context of claim 20.

The closest prior art, Soik, is for a screening passage for screening pulp slurry. There is no motivation to use it as a substrate in a print cartridge, as in the context of claim 20.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita K Alanko whose telephone number is 571-272-1458. The examiner can normally be reached on Mon-Fri until 2:30 pm (Wed until 11:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571-272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Anita K. Alanko*

Anita K Alanko  
Primary Examiner  
Art Unit 1765